CLAIMS

1/ An electromagnetic probe, comprising at least one assembly comprising in combination:

· a coaxial type connection;

· a ground plane connected to the outer sheath of the coaxial connection;

· a reflector cone placed facing the ground plane and shaped to define impedance that is at least substantially constant along its profile; and

· a dielectric medium interposed at least in part between the reflector cone and the ground plane.

2/ A probe according to claim 1, further comprising a sleeve centered on the ground plane and placed facing the reflector cone.

3/ A probe according to claim 1, further comprising a rod-shaped element passing through at least part of the reflector cone and constituting a matching stub extending the central core of the coaxial connection.

4/ A probe according to claim 1, wherein the assembly is circularly symmetrical about a central axis.

5/ A probe according to claim 1, wherein the reflector cone has a profiled surface defined by a generator line that is concave towards the ground plane.

6/ A probe according to claim 1, wherein the ground plane is defined by a plate.

7/ A probe according to claim 6, wherein the ground plane has a surface facing the reflector cone, which surface converges towards the cone and towards the central axis.

8/ A probe according to claim 7, wherein the converging surface of the ground plane possesses curvature that is generally continuous.

9/ A probe according to claim 7, wherein the converging surface of the ground plane is formed by a generally plane plate having a cylinder projecting from its center.

10/ A probe according to claim 2, wherein the sleeve is stepped.

11/ A probe according to claim 10, wherein the sleeve is made up of a plurality of cylinders on the same axis, and of decreasing diameter going towards the reflector cone.

12/ A probe according to claim 1, wherein at least a portion of the dielectric medium possesses permittivity greater than 1.

13/ A probe according to claim 1, wherein the dielectric medium substantially fills the space lying between the reflector cone and the ground plane, with the exception of a peripheral zone adjacent to the ground plane.

14/ A probe according to claim 1, wherein the ground plane and the sleeve are made out of a single piece.

15/ A probe according to claim 3, wherein the rod-shaped element constituting a stub is stepped.

16/ A probe according to claim 3, including a dielectric bushing surrounding at least a portion of the stub-forming rod-shaped element.

17/ A probe according to claim 1, comprising a plurality of assemblies centered on axes that are not mutually parallel so as to form a multidirectional probe.

18/ A probe according to claim 17, wherein the ground planes of the various individual assemblies lie on the outside faces of a polyhedron.

19/ A probe according to claim 1, comprising three individual assemblies centered on respective axes O-O that are mutually orthogonal in pairs.

20/ A probe according to claim 17, comprising three individual assemblies lying on faces defining a corner of a cube.

21/ A probe according to claim 17, comprising a support polyhedron integrated with the ground planes of the various individual assemblies.